

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/019333 A1

(51) International Patent Classification⁷: **C08L 23/08**,
23/06, C08J 5/18

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(21) International Application Number:
PCT/GB2004/003483

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 12 August 2004 (12.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0319467.7 19 August 2003 (19.08.2003) GB

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,
SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG)
- of inventorship (Rule 4.17(iv)) for US only

(71) Applicant (for all designated States except US): **BP
CHEMICALS LIMITED** [GB/GB]; Chertsey Road,
Sunbury on Thames, Middlesex TW16 7BP (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **CHAI, Choon, Kooi**
[MY/FR]; 7 Avenue Van Gogh, Domaine de Calas,
F-13480 Cabries (FR).

(74) Agent: **HAWKINS, David, George**; BP International
Limited, Patents & Agreements, Chertsey Road, Sun-
bury-on-Thames, Middlesex TW16 7LN (GB).

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: POLYMER BLENDS

(57) Abstract: Novel polymer blends comprise (a) 1 -99% by weight of a copolymer of ethylene and an alpha olefin having from 3 to 10 carbon atoms, said copolymer having (iv) a density in the range 0.905 to 0.940 g.cm⁻³, (v) a melt elastic modulus G' (G''= 500 Pa) in the range 10 to 150 Pa, and (vi) a melt index in the range 5 to 50, and (b) from 1 - 99% by weight of a low density polyethylene (LDPE) polymer having a density from 0.914 to 0.928 g cm⁻³ wherein the sum of (a) and (b) is 100 %. The copolymers of component (a) are typically prepared by use of metallocene catalysts. The blends exhibit advantageous melt elastic modulus in the range 30 to 200 Pa. The blends are particularly suitable for extrusion coating applications.



WO 2005/019333 A1